

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Original): A method of repairing a joint between conductor elements of a stator winding bar of an electrical machine and a connecting device connected to an end of the stator winding bar for providing electrical connection and coolant flow for the conductor elements, the method comprising the steps of:

removing an existing connecting device from the end of the stator winding bar;

aligning the conductors of the end of the stator winding bar by heating the bar end to above the flow point of the braze holding the conductors in position while simultaneously holding the conductors of the end of the stator winding bar under compression in two orthogonal directions perpendicular to the length of the stator winding bar;

forming slots in the end of the stator winding bar and at locations such that said slots extend to locations where said conductor elements abut one another;

applying an electrically conductive first connecting part onto the end of the stator winding bar such that said first connecting part substantially surrounds said end of the stator winding bar; and

sealing said slots and any gaps between the end of the stator winding bar and said electrically conductive first connecting part.

Claim 2 (Original): The method of claim 1 wherein said sealing step comprises:

filling gaps between said first connecting part and an outer surface of said end of the stator winding bar with at least one first filler element;

filling said slots with at least one second filler element; and

heating at least one of said end of the stator winding bar and said first connecting part, wherein at least one of said first and second filler elements comprise at least one layer of a

material which melts during said heating step, and adding sufficient additional meltable material to assure complete sealing of said gaps and slots.

Claim 3 (Original): The method of claim 1 wherein said sealing step comprises:

filling gaps between said first connecting part and an outer surface of said end of the stator winding bar with at least one first filler element;

filling said slots with at least one second filler element; and

inductive heating at least one of said end of the stator winding bar and said first connecting part, wherein at least one of said first and second filler elements comprise at least one layer of a material which melts during said heating step, and adding sufficient additional meltable material to assure complete sealing of said gaps and slots.

Claim 4 (Original): The method of claim 3 including the further steps of:

visually inspecting said sealed gaps via said first connecting part; and

applying an electrically conductive second connecting part onto said first connecting part so as to form a complete connecting part.

Claim 5 (Original): The method of claims 1 including a step of cleaning said end of the stator winding bar after the step of removing the existing connecting device.

Claim 6 (Original): The method of claims 1 including a step of material-cutting machining said end of the stator winding bar after the step of removing the existing connecting device.

Claim 7 (Original): The method of claim 6 wherein said material-cutting machining

comprises milling.

Claim 8 (Original): The method of claims 1 wherein at least one of said conductor elements is hollow.

Claim 9 (Original): The method of claims 1 wherein at least one of said conductor elements is solid.

Claim 10 (Original): The method of claims 1 wherein said step of removing an existing connecting device from the end of the stator winding bar comprises inductive heating at least one of said stator winding bar and said connecting device.

Claim 11 (Original): The method of claim 1 wherein groups of four of said conductor elements abut one another at points and said slots extend to said points.

Claim 12 (Original): The method of claim 10 wherein said slots form straight lines.

Claim 13 (Original): The method of claim 10 wherein said slots form intersecting sets of straight lines which intersect at said points.

Claim 14 (Original): The method of one of claims 2 wherein at least one of said first and second filler elements comprise a spacer element.

Claim 15 (Original): The method of one of claims 3 wherein at least one of said first and second filler elements comprise a spacer element.

Claim 16 (Original): The method of claim 8 including, after said slot forming step, the step of widening said hollow conductor elements at said end of the stator winding bar until edges of adjacent conductor elements touch one another.

Claim 17 (Original): The method of claim 16 wherein groups of four of said conductor elements abut one another at points and said slots extend to said points, including the step of drilling holes into said bar at said points and inserting pins of meltable material into the drilled holes.

Claim 18 (Original): A method of repairing a joint between conductor elements of a stator winding bar of an electrical machine and a connecting device connected to an end of the stator winding bar for providing electrical connection and coolant flow for the conductor elements, the method comprising the steps of:

removing an existing connecting device from the end of the stator winding bar;

aligning the conductors of the end of the stator winding bar by heating the bar end to above the flow point of the braze holding the conductors in position while simultaneously holding the conductors of the end of the stator winding bar under compression in two orthogonal directions perpendicular to the length of the stator winding bar;

applying an electrically conductive first connecting part onto the end of the stator winding bar such that said first connecting part substantially surrounds said end of the stator winding bar; and

sealing any gaps between the end of the stator winding bar and said electrically conductive first connecting part.

Claim 19 (Original): The method of claim 18 including the step of maintaining the alignment of the conductors of the end of the stator winding bar during said sealing step.

Claim 20 (Original): The method of claim 19 wherein said maintaining step comprises:

applying, in said applying step, an electrically conductive first connecting part having a window covered by a floating cover plate;

filling gaps between said first connecting part and an outer surface of said end of the stator winding bar with at least one braze filler element;

applying pressure to the conductors of the end of the stator winding bar via said floating cover plate; and

heating, in said sealing step, at least one of said end of the stator winding bar and said first connecting part to melt said at least one braze filler element, while maintaining said pressure.

Claim 21 (Original): A method of repairing a joint between conductor elements of a stator winding bar of an electrical machine and a connecting device connected to an end of the stator winding bar for providing electrical connection and coolant flow for the conductor elements, the method comprising the steps of:

removing an existing connecting device from the end of the stator winding bar;

cleaning said end of the stator winding bar;

aligning the conductors of the end of the stator winding bar by heating the bar end to above the flow point of the braze holding the conductors in position while simultaneously holding the conductors of the end of the stator winding bar under compression in the two orthogonal directions perpendicular to the length of the stator winding bar;

material-cutting machining said end of the stator winding bar;

forming slots in the end of the stator winding bar and at locations such that said slots extend to locations where said conductor elements abut one another;

applying an electrically conductive first connecting part onto the end of the stator winding bar such that said first connecting part substantially surrounds said end of the stator winding bar;

filling gaps between said first connecting part and an outer surface of said end of the stator winding bar with at least one first filler element;

filling said slots with at least one second filler element;

sealing said gaps and slots by heating at least one of said end of the stator winding bar and said first connecting part, at least one of said first and second filler elements comprising at least one layer of a material which melts during said heating step, and adding sufficient additional meltable material to assure complete sealing of said gaps and slots;

visually inspecting said sealed gaps via said first connecting part;

applying an electrically conductive second connecting part onto said first connecting part so as to form a complete connecting part; and

testing the repaired joint.

Claim 22 (Original): The method of claim 18 including the step of maintaining the alignment of the conductors of the end of the stator winding bar during said sealing step.

Claim 23 (Original): The method of claim 19 wherein said maintaining step comprises:

applying, in said step of applying an electrically conductive first connecting part onto the end of the stator winding bar, an electrically conductive first connecting part having a window covered by a floating cover plate;

applying pressure to the conductors of the end of the stator winding bar via said floating cover plate; and

heating, in said sealing step, at least one of said end of the stator winding bar and said first connecting part to melt said at least one first filler element, while maintaining said pressure.

Claims 24-44 (Canceled).